

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

6460.2  
CHG 16

03/04/97

ELECTRONIC EQUIPMENT MODIFICATION HANDBOOK - NEXT GENERATION WEATHER  
SUBJ: RADAR (NEXRAD)

---

CHAPTER 17. REPLACE HIGH-SPEED CAP AND SEALS  
AND INSTALL OIL SLINGER IN AZIMUTH  
GEARBOX ASSEMBLY

1. **PURPOSE.** This modification of the Azimuth Gearbox Assembly, UD2A1A3A3, part number 40505-1221-101, replaces the high-speed cap and oil seal, and installs an oil slinger to eliminate oil seepage and prevent damage to the Azimuth Servo Motor UD2A1A3B1. This directive implements Engineering Change Proposal (ECP) 4260-033R4, New Seals for Azimuth and Gear Box Assemblies.

2. **DISTRIBUTION.** This directive is distributed to selected offices and services within Washington headquarters, the William J. Hughes Technical Center, the Mike Monroney Aeronautical Center, regional Airway Facilities divisions, and Airway Facilities field offices having the following facilities/equipment: NXRAD.

3. **WITHDRAWALS.** None.

4. **REFERENCES.** None.

5. **BACKGROUND.**

a. The replacement of the high-speed cap and oil seals, and the installation of the oil slinger in the Azimuth Gearbox Assembly eliminates oil seepage into the Azimuth Servo Motor and is necessary to prevent damage to the motor.

b. The modification will be accomplished by a team from Lockheed Martin, Peerless Winsmith, Radiations Systems Inc. (RSI), or the Operational Support Facility (OSF).

6. **APPLICATION.** This modification applies to the following FAA WSR-88D Radar Data Acquisition (RDA) sites:

Anchorage, AK  
Bethel, AK  
Fairbanks, AK  
Middleton Island, AK  
Sitka, AK  
South Shore, HI

Kamuela/Kohala Aprt, HI  
Molokai, HI  
King Salmon, AK  
San Juan, PR  
South Kauai, HI  
Nome, AK

7. **MATERIALS REQUIRED.** The following materials are required to modify each unit and will be supplied by Lockheed Martin.

<u>Description</u>	<u>Quantity</u>
a. Hose Clamp	1 each
b. Street Elbow	1 each
c. Bottle Cap	1 each
d. Plastic Bottle	1 each
e. Tubing (24 inch)	1 each
f. Hose Clamp	1 each
g. Hose Barb	2 each
h. Motor Adapter	1 each
i. Plastic Motor Adapter Caplugs	1 each
j. Customer Replacement Kit	1 each
(1) Allen Wrench	1 each
(2) High Speed Cap O-Ring	1 each
(3) High Speed Cap Gasket	1 each
(4) Cap Retaining Tools	2 each
(5) Shipping Cap Retainer	1 each
(6) Nameplate	1 each

NOTE: The customer replacement kit consists of a fully assembled high speed cap with pinion and oil slinger installed.

8. **SOURCE OF MATERIALS.** Kits will be furnished by Lockheed Martin.

9. **SPECIAL TOOLS AND TEST EQUIPMENT REQUIRED.** All special tools listed in paragraph 7 will be provided by Lockheed Martin.

10. **MODIFICATION TO BE PERFORMED BY.** The modification will be performed by a team from Lockheed Martin, Peerless Winsmith, RSI, or the OSF.

11. **WHEN MODIFICATION IS TO BE PERFORMED.** Upon verification of completed modification, complete attachment 1 no later than 60 days after receipt of this directive.

12. **ESTIMATED TIME REQUIRED.** A total of 9.0 man-hours is required to accomplish this modification. The personnel performing this task will have maintenance and test experience with the WSR-88D Antenna/Pedestal. One technician is required for this procedure.

13. **DISPOSITION OF SURPLUS PARTS.** All removed parts is to be returned to the National Reconditioning Center (NRC). Mark the return tag with:

NSN, part number, and part name  
For remarks, write "Part returned for modification"

Return the removed parts immediately to the NRC for modification at the following address:

National Reconditioning Center  
1520 East Bannister Road  
Kansas City, MO 64131

14. **MODIFICATION PROCEDURE.** Procedure furnished by Lockheed Martin.

15. **TEST AFTER MODIFICATION.** The contractor will perform the test after completion of the modification.

16. **RESULT OF MODIFICATION.** The WSR-88D products supplied to the end user remain the same. This modification eliminates oil seepage preventing damage to the Azimuth Servo Motor UD2A1A3B1.

17. **CHANGES TO INSTRUCTION BOOKS.** The revised pages required by this modification will be distributed by the OSF System Documentation Section and direct shipped from the National Logistics Supply Center (NLSC) at Kansas City, MO, to the WSR-88D sites and to the required FAA administrative offices. The following is a list of affected technical manuals:

<u>Technical Manual</u>	<u>Dated</u>
TI 6460.1 V2 (EHB 6-501)	1 August 1996
TI 6460.1 V4 (EHB 6-503)	31 October 1993
TI 6460.1 V4 (EHB 6-503-2)	31 October 1993
TI 6460.1 V13 (EHB 6-513)	6 March 1995
TI 6460.1 V22 (EHB 6-514)	1 June 1994

18. **CHANGES TO INSTALLATION DRAWINGS.** None.

19. **CHANGES TO RECORDED DATA.** Enter this directive number, date, and chapter number on the appropriate FAA Form 6032-1, Airway Facilities Modification Record. Also, complete the attached form, attachment 1, and forward to:

System Support Branch, Logistics Section  
WSR-88D Operational Support Facility  
3200 Marshall Ave. Suite 101  
Norman, Oklahoma 73072-8028

Fax number: (405) 366-6553

Or e-mail information to:

KHARE@osf.noaa.gov

20. **CHANGES TO TABLE OF CONTENTS.** This chapter will be included in the next revision to the table of contents for Order 6460.2.

21. **RECOMMENDATIONS FOR CHANGES.** Forward any recommendations for changes to this directive through normal channels to the National Airway Systems Engineering Division, AOS-200, Operational Support.

**Signed**

George W. Terrell  
Program Director for Operational Support

Attachment